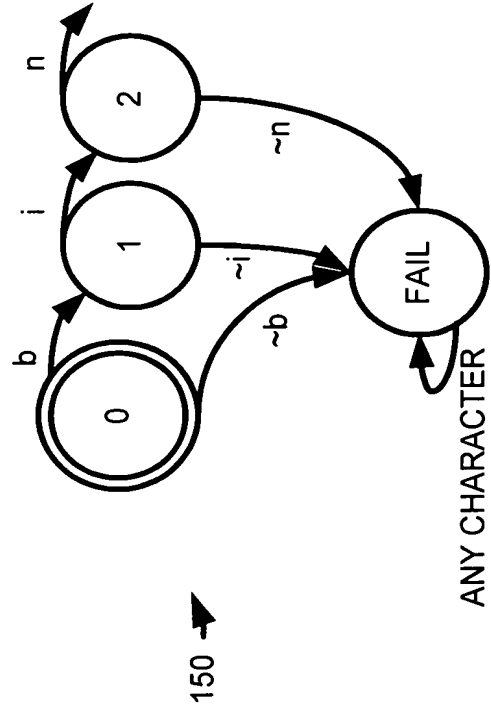FIG. 1A (PRIOR ART)

FIG. 1B (PRIOR ART)
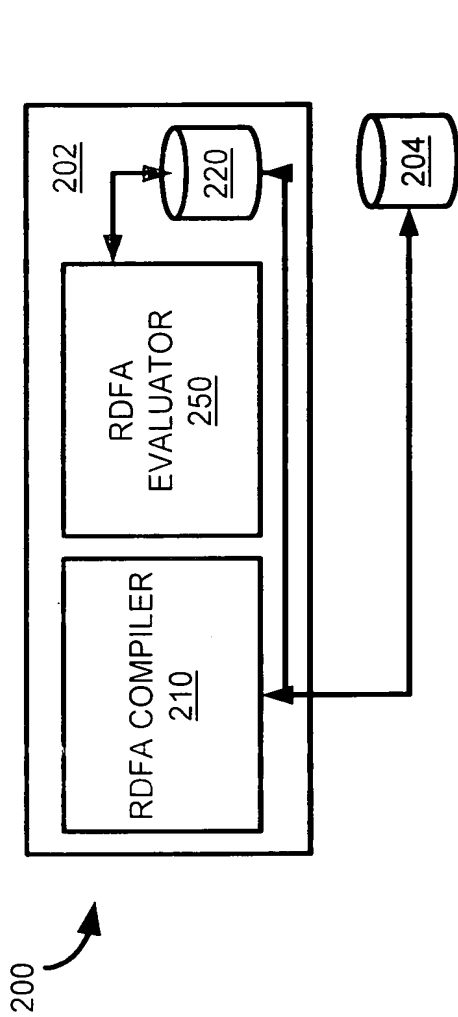
FIG. 2A
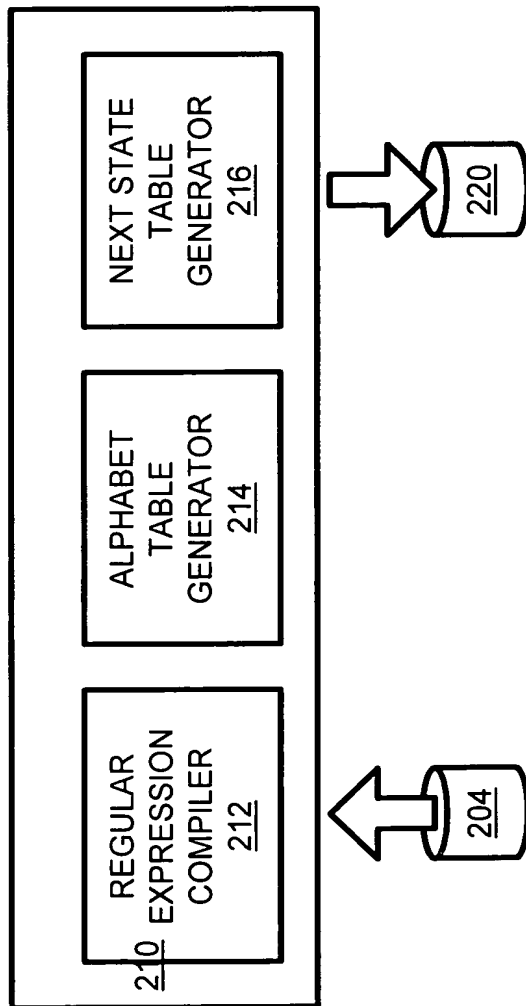
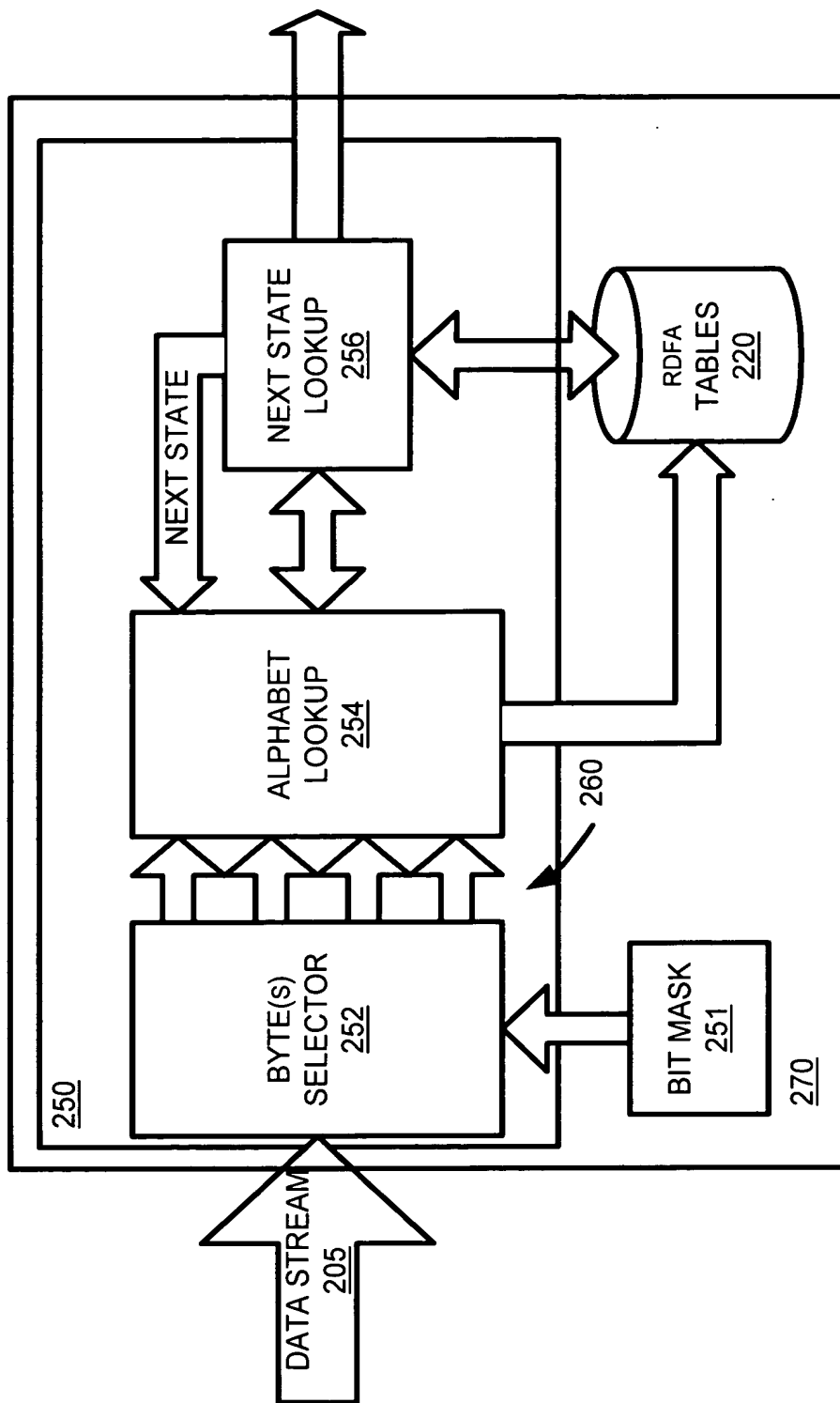FIG. 2B

FIG. 2C

Lookup Input 320

| 322 | 324 | 326 | 328 |

Lookup Tables 310

312

314

316

318

Lookup Results 330

| 332 | 334 | 336 | 338 |
| (2 bits) | (3 bits) | (3 bits) | (4 bits) |

300

FIG. 3

CURRENT STATE

410

420

12 BIT INDEX

FIG. 4

Input bytes - 320

Look-Up Tables, 310;
One set for each state

Index Table, 410, with
bits for each state

s1

s2

s3

s4

s5

s6

s7

s8

s9

s10

s11

s12

Example of
bits in
Index Table
for States
1, 2, 3

Figure 4A

441
Bits from look-up table
and bits from index table
combined

s n

Output, 330

Next State Table,
450, with a word
for each state

Result
Storage
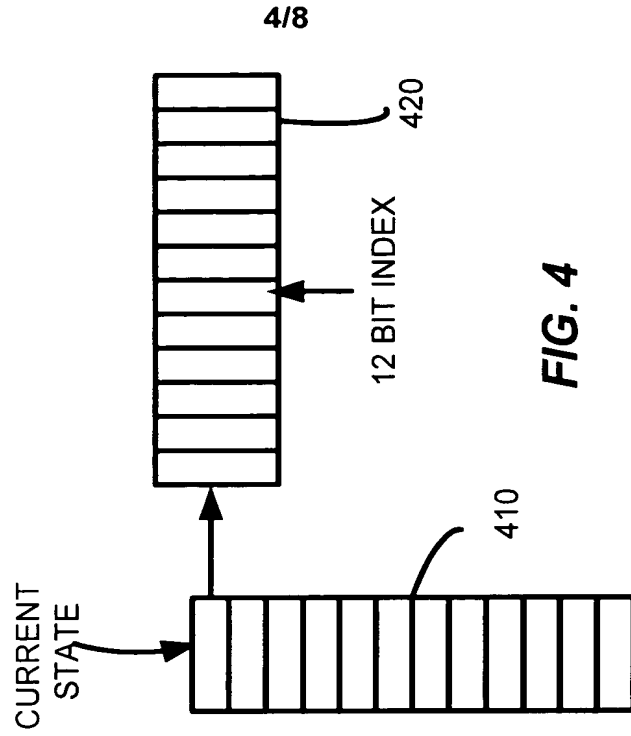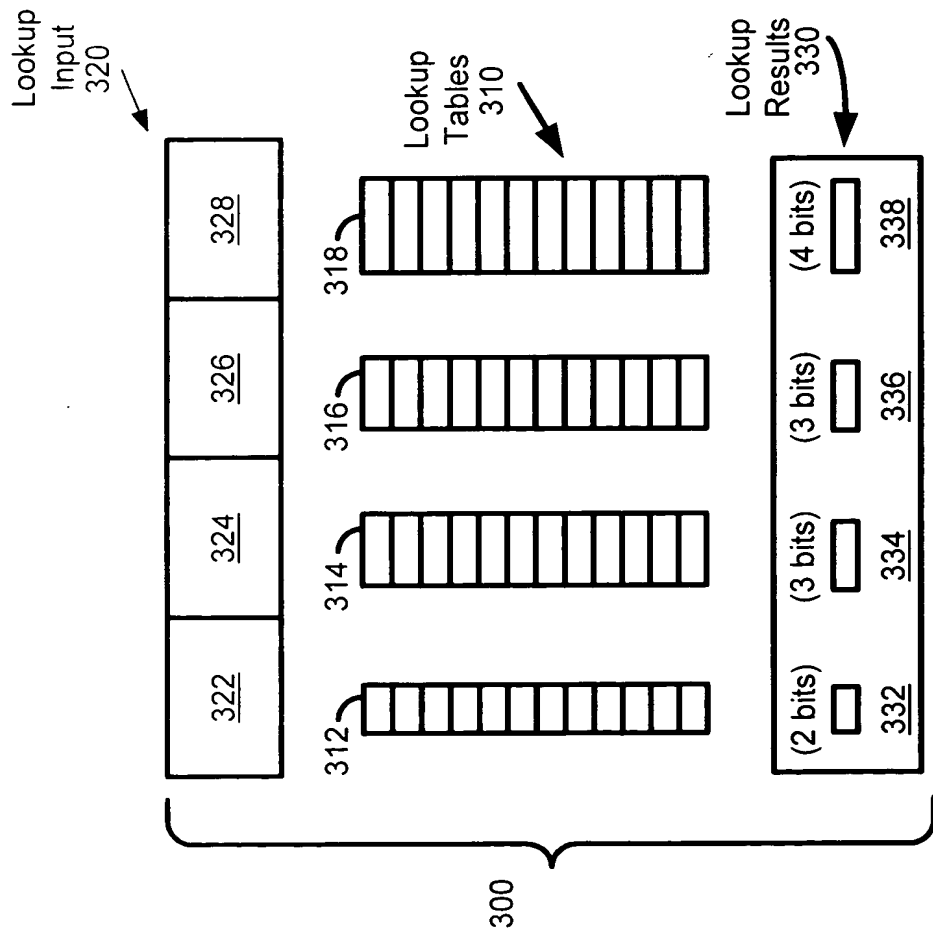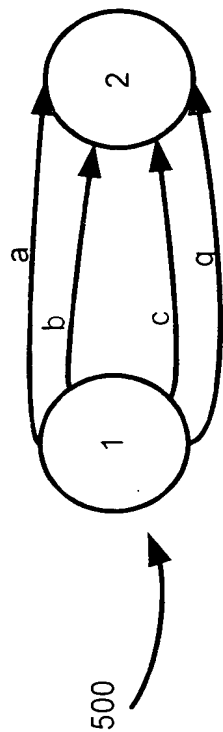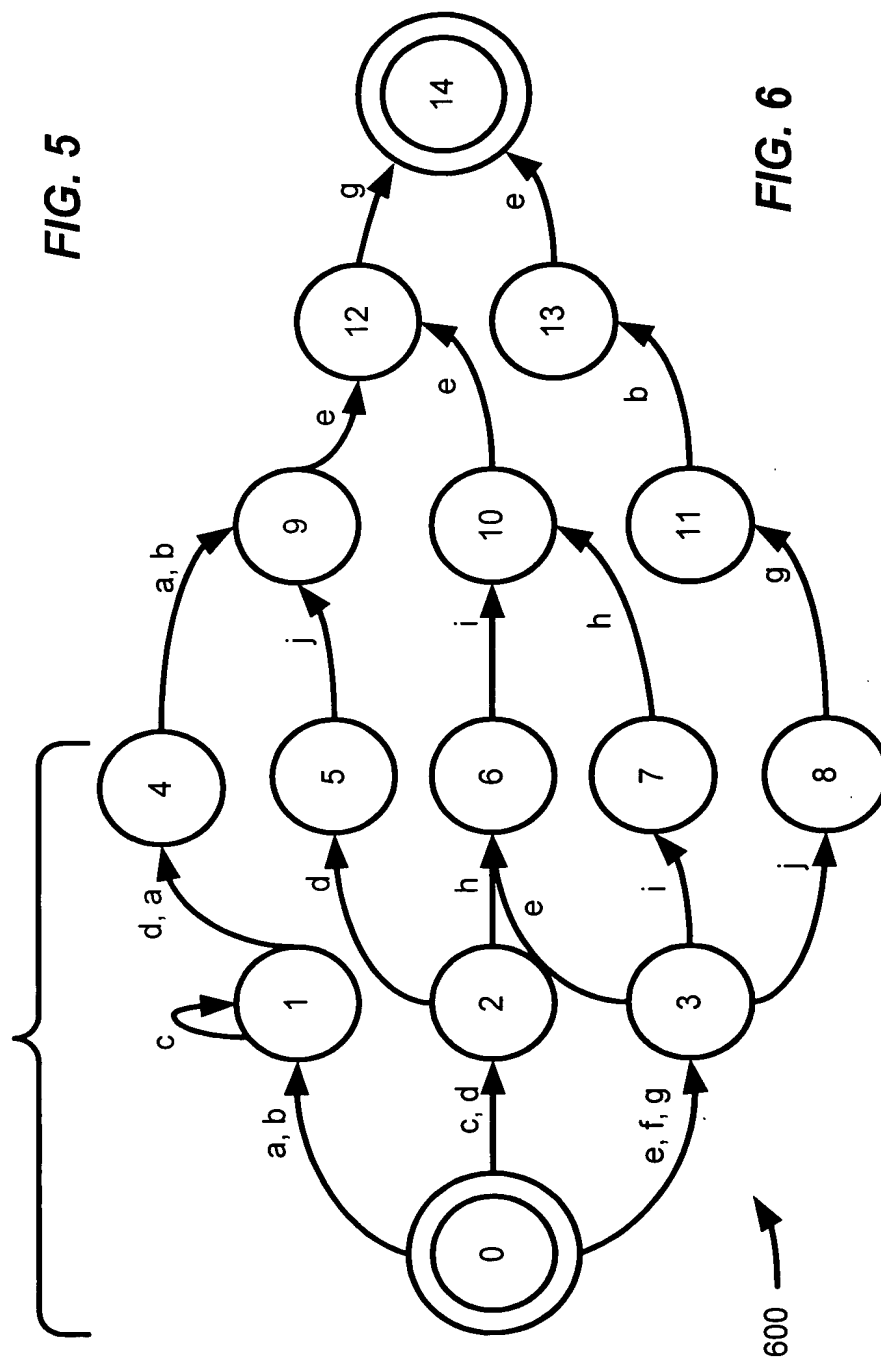442

FIG. 5

FIG. 6

Fig. 6A   Illustration of number of states reachable by 2-closure.
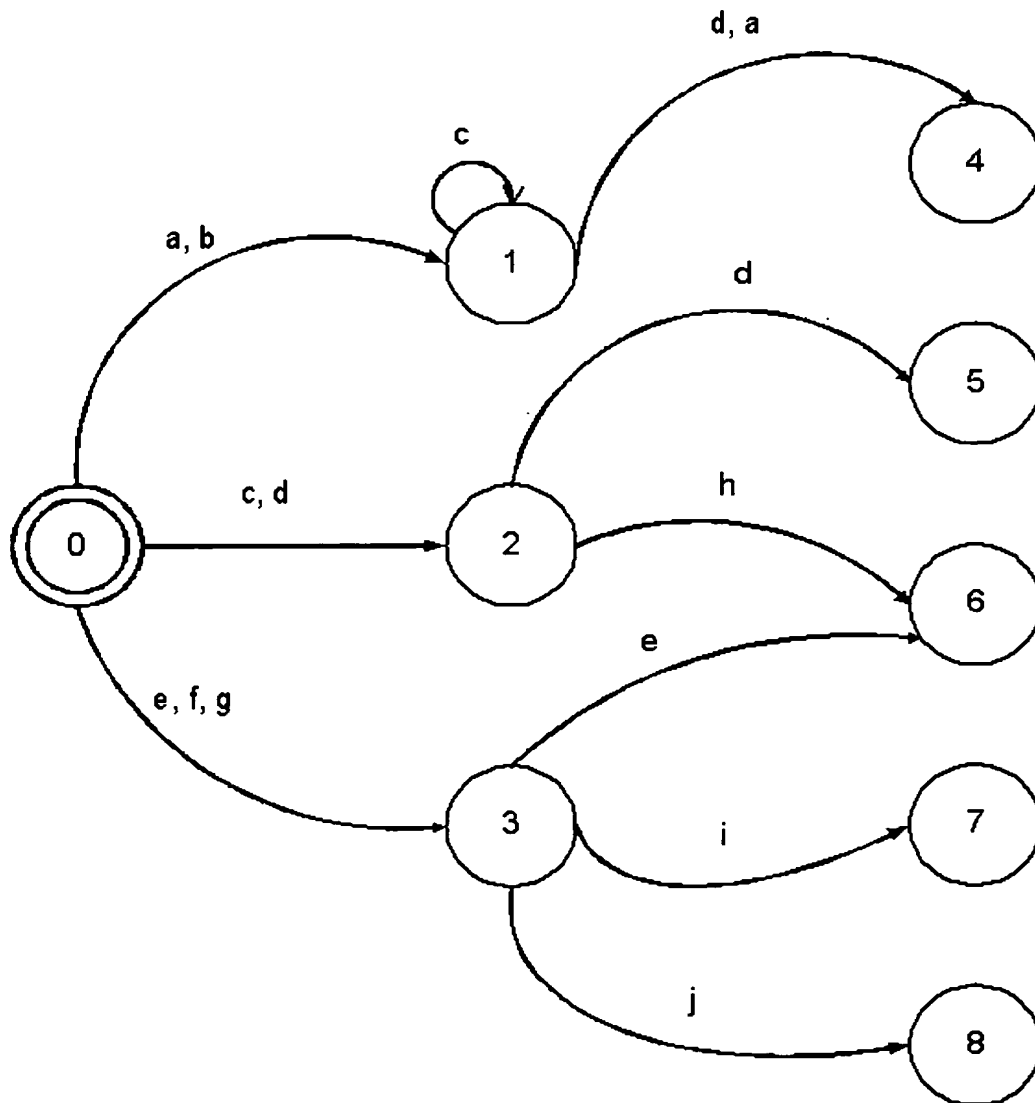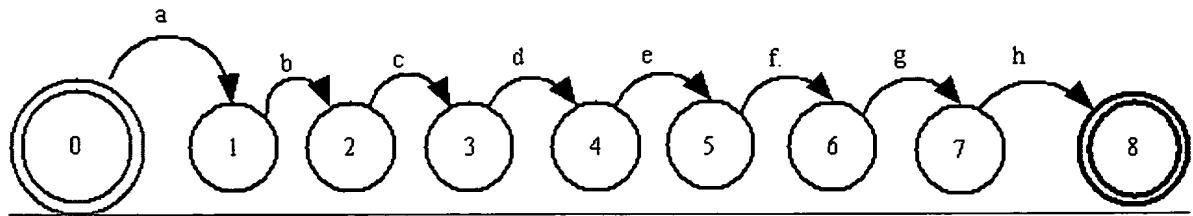
Fig. 7A   DFA for processing 8 characters

Fig 7B   RDFA for processing 4 bytes in parallel.